User's Manual

DAQSTATION CX1000/CX2000 Functional Changes Resulting from Firmware Upgrade (Version 3.02)

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Yokogawa Electric Corporation

IM 04L31A01-05E
1st Edition

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This manual explains the functions that have been changed on the CX1000/CX2000 with firmware version 3.02. If you purchased a CX1000/CX2000 with firmware version 3.02 or later, change the contents of the following manuals with the contents of this manual.

Manuals Provided on the CD-ROM

Manual Title	Manual No.	Description
CX1000 User's Manual	IM 04L31A01-03E	See this manual for the descriptions of the CX1000 operations.
CX2000 User's Manual	IM 04L31A01-01E	See this manual for the descriptions of the CX2000 operations.
CX1000/CX2000 Communication Interface User's Manual	IM 04L31A01-17E	See this manual for the descriptions of communication commands.
DAQSTANDARD User's Manual	IM 04L31A01-61E	See this manual for the descriptions of the DAQSTANDARD operations.

Paper Manuals

Manual Title	Manual No.	Description
CX1000 Operation Guide	IM 04L31A01-04E	See this manual for a list of initial values of the CX1000.
CX2000 Operation Guide	IM 04L31A01-02E	See this manual for a list of initial values of the CX2000.

Overview of the Functional Changes

The functions that have been changed with the upgrading of the firmware (version 3.02) on the CX1000/CX2000 are described below.

Event Output Setting

- Before Version 3.02
  Event output is set for each program pattern.
- Version 3.02 and later
  The event output setting is independent from the program pattern setting. The event output setting is applied to all program patterns. The event output can also be set for each program pattern as before.

Displayed Language

- Before Version 3.02
  The selectable languages displayed on the screen are English, Japanese, German, and French.
- Version 3.02 and later
  Chinese is available in addition to the languages listed above.

Procedure for Checking the Firmware Version

1. In the operation mode, press the **FUNC key**.
2. Press the **[Next 1/2] soft key**.
3. Press the **[Log] soft key**.
4. Press the **[System] soft key**.
   As shown below, the system information display shows the firmware version.

```
PRODUCT:
  MAC address  00:00:64:81:35:74
  Version      3.02     Graphic : B8700ZC 3.02
                 |
```

Firmware version

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Operations on the CX1000/CX2000

With the functional changes, the operations on the CX1000/CX2000 change as follows:

Event Output Setting in Basic Control Settings (New Operation)

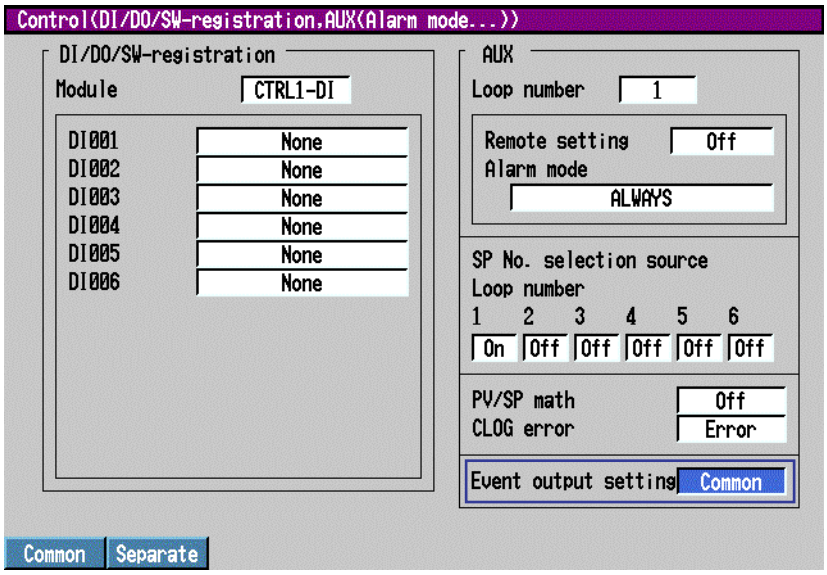
Select Common or Separate by carrying out the procedure described below.

- Common (factory default setting)
  Set a common event output setting for all program patterns.
- Separate
  Set the event output for each program pattern.

Displaying the Setting Display

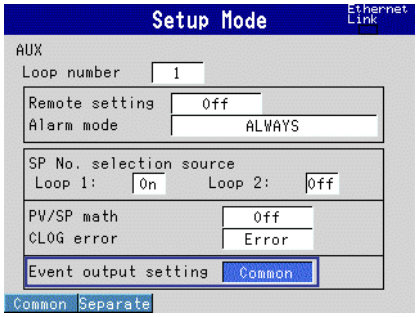
On the CX2000

Press the keys in the following sequence:
MENU key (switch to the setting mode (control)) > **Hold down the FUNC key for 3 seconds** (switch to the basic setting mode) > **#10 soft key** (select [Control]) > **#2 soft key** (select [DI/DO/SW-registration, AUX (Alarm mode...)])
From the operation display, use the above keys to open the following setting display.



On the CX1000

Press the keys in the following sequence:
MENU key (switch to the setting mode (control)) > **Hold down the FUNC key for 3 seconds** (switch to the basic setting mode) > **#12 soft key** (select [Control]) > **#4 soft key** (select [AUX (Alarm mode...)])
From the operation display, use the above keys to open the following setting display.



Setup Procedure

1. Use the **arrow keys** to move the cursor (blue) to the [Event output setting] box.
   A soft key menu is displayed at the bottom of the display.
2. Press the [Common] or [Separate] **soft key**.
   The box for the item you changed turns yellow, and the cursor moves to the next item.
3. Press the **DISP/ENTER key** to confirm the changes.
   The boxes for the items you changed turn from yellow to white, and the cursor returns to the first item box.

Saving the Settings

1. Press the **ESC key**.
   The display returns to the basic setting menu.
2. Press the **[End] soft key**.
   A window appears for you to confirm the saving of the new settings.
3. Select [Yes] and press the **DISP/ENTER key**.
   The operation screen is displayed.

Event Output Setting in Setting Mode (Control)

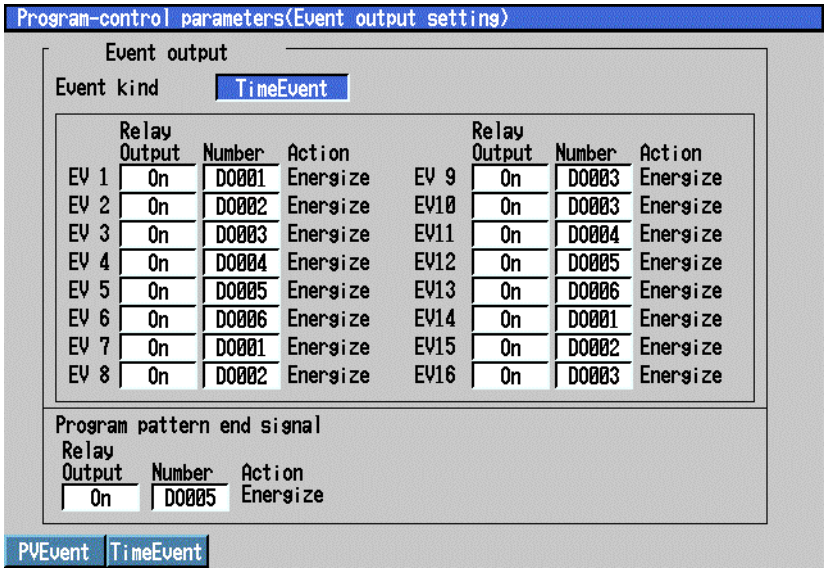
If you selected [Separate] in the Event output setting in Basic Control Settings, carry out the procedure below to set the [Pattern number] box to a program pattern number between [1] and [30].
For a description of the settings other than [Pattern number], see section 5.7, “Program Pattern Settings > Event Output Settings” in the *DAQSTATION CX2000 User’s Manual (IM 04L31LA01-01E)* or the *DAQSTATION CX1000 User’s Manual (IM 04L31LA01-03E)*.

Opening the Setting Display

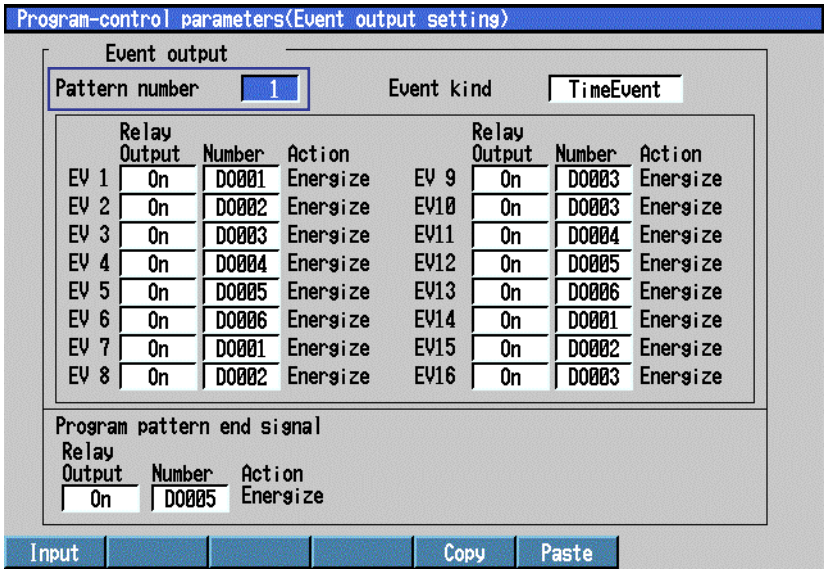
On the CX2000

Press the keys in the following sequence:
MENU key (switch to the setting mode (control)) > **#7 soft key** (select [Program-control parameters]) > **#2 soft key** (select [Event output setting])
From the operation display, use the above keys to open the following display.

- **If you selected [Common] for Event output setting in Basic Control Settings**



- **If you selected [Separate] for Event output setting in Basic Control Settings**



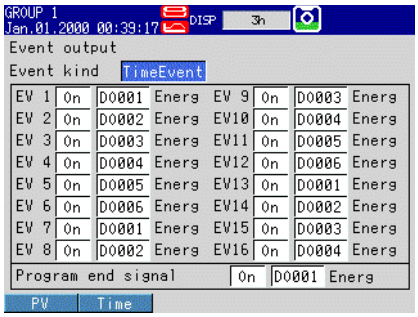
On the CX1000

Press the keys in the following sequence:

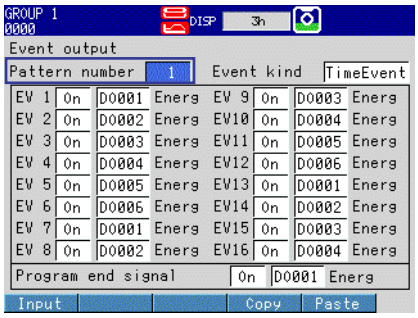
MENU key (switch to the setting mode (control)) > **#7 soft key** (select [Program-control parameters]) > **#6 soft key** (select [Event output setting])

From the operation display, use the above keys to open the following display.

- **If you selected [Common] for Event output setting in Basic Control Settings**



- **If you selected [Separate] for Event output setting in Basic Control Settings**



Setup Procedure

1. Use the **arrow keys** to move the cursor (blue) to the item box you wish to change.
   A soft key menu is displayed at the bottom of the display.
2. Press the **soft key** corresponding to the value you wish to select.
   The box for the item you changed turns yellow, and the cursor moves to the next item.
3. Repeat steps 1 and 2 to change the value of all the items you wish to change.
4. Press the **DISP/ENTER key** to confirm the changes.
   The boxes for the items you changed turn from yellow to white, and the cursor returns to the first item box.

Changing the Displayed Language

You can select [Chinese] by carrying out the procedure below.

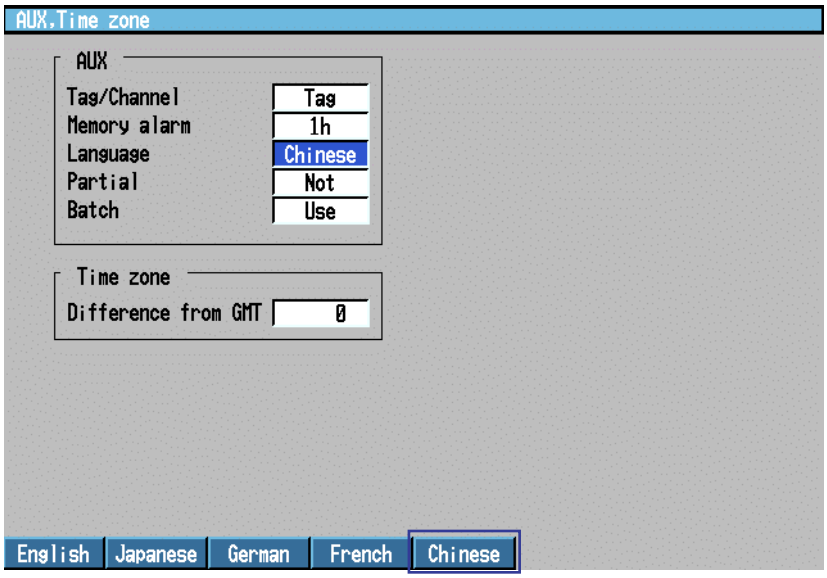
Displaying the Setting Display

On the CX2000

Press the keys in the following sequence:

MENU key (switch to the setting mode (control)) > **Hold down the FUNC key for 3 seconds** (switch to the basic setting mode) > **#9 soft key** (select [Aux, Time zone])

From the operation display, use the above keys to open the following setting display.

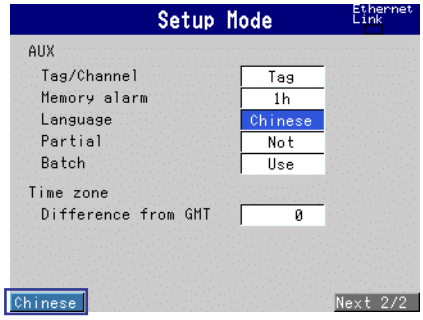


On the CX1000

Press the keys in the following sequence:

MENU key (switch to the setting mode (control)) > **Hold down the FUNC key for 3 seconds** (switch to the basic setting mode) > **#11 soft key** (select [Aux, Time zone])

From the operation display, use the above keys to open the following setting display.



Setup Procedure

1. Use the **arrow keys** to move the cursor (blue) to the [Language] box.
   [English], [Japanese], [German], [French], and [Chinese] appear in the soft key menu at the bottom of the display.
   [Chinese] appear when you press the Next 1/2 soft key.
2. Press the [English], [Japanese], [German], [French], or [Chinese] **soft key**.
   The [Language] box turns yellow, and the cursor moves to the next item.
3. Press the **DISP/ENTER key** to confirm the changes.
   The boxes for the items you changed turn from yellow to white, and the cursor returns to the first item box.

Saving the Settings

1. Press the **ESC key**.
   The display returns to the basic setting menu.
2. Press the **[End] soft key**.
   A window appears for you to confirm the saving of the new settings.
3. Select [Yes] and press the **DISP/ENTER key**.

Precautions to Be Taken When Loading Setup Data

As a general rule, load setup data of the same firmware version. If you must load setup data of different versions, note the following points.

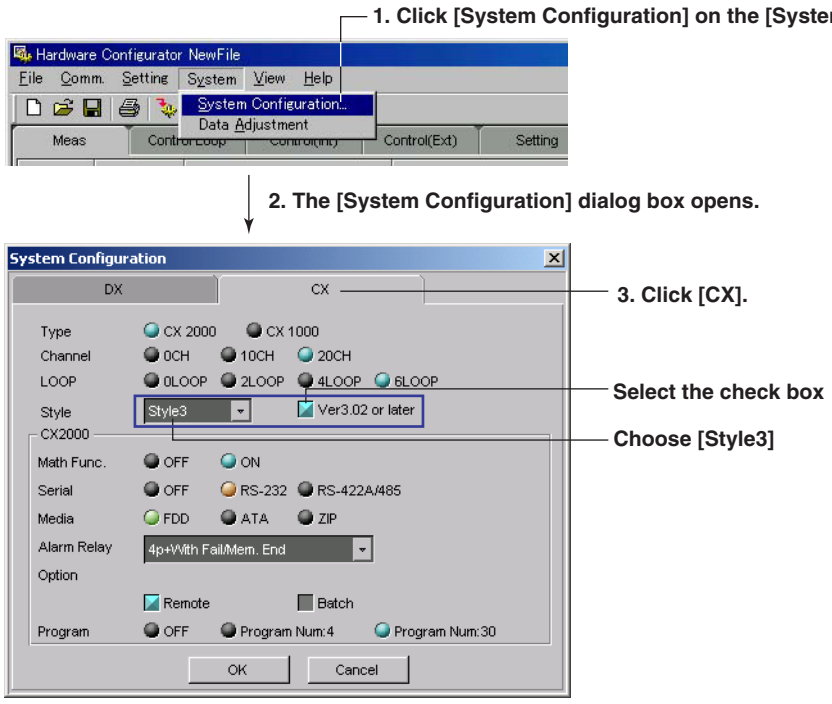
- **When loading setup data that has been saved on version 3.01 using version 3.02**
  Event output settings (time event, PV event, and program pattern end signal settings) in Setting mode (Control) are not loaded.
- **When loading setup data that has been saved on version 3.02 using version 3.01**
  - Event output setting (common or separate) in Basic Control Settings is not loaded.
  - Event output settings (time event, PV event, and program pattern end signal settings) in Setting mode (Control) are not loaded.
  - Setup data is not loaded when the displayed language is set to Chinese.

Operations on the DAQSTANDARD

With the functional changes on the CX1000/CX2000, the operations on the DAQSTANDARD change as follows:

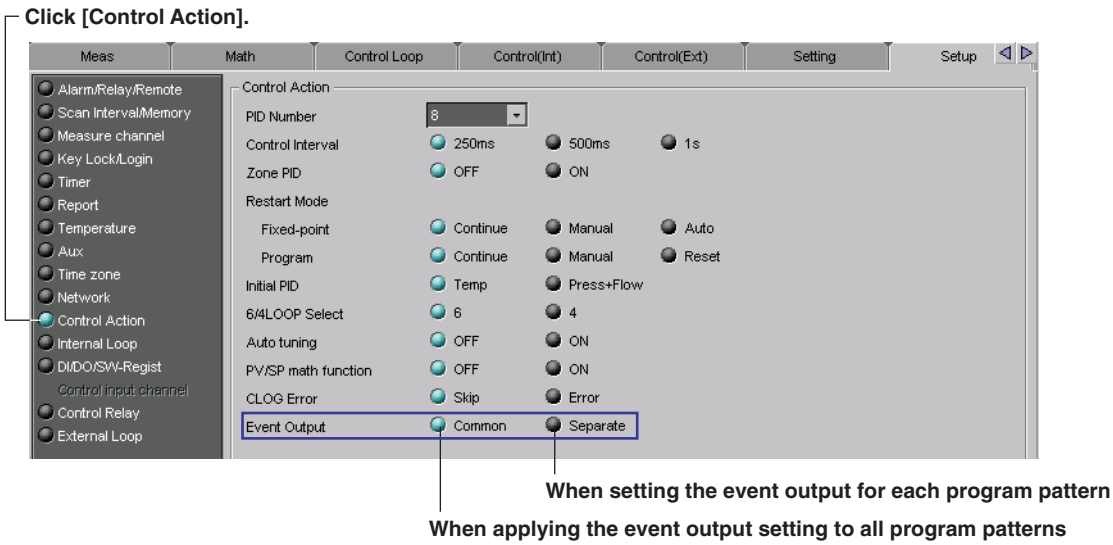
System Configuration

When creating a new hardware configuration file or when changing the system configuration to match the specifications of the CX to be connected after opening an existing hardware configuration file, set Style to Style3 and select the Ver 3.02 or later check box. For a description of other setup parameters, follow the explanations in section 3.2, “Setting and Checking the System Configuration and Initializing Setup Data” in the *DAQSTANDARD User’s Manual (IM 04L31A01-61E)*.



Setting Control Action Related Parameters in Control Function Basic Settings

Set the [Event Output] to [Common] or [Separate]. For a description of other setup parameters, follow the explanations in section 3.3, “Control Function Basic Settings” in the *DAQSTANDARD User’s Manual (IM 04L31A01-61E)*.



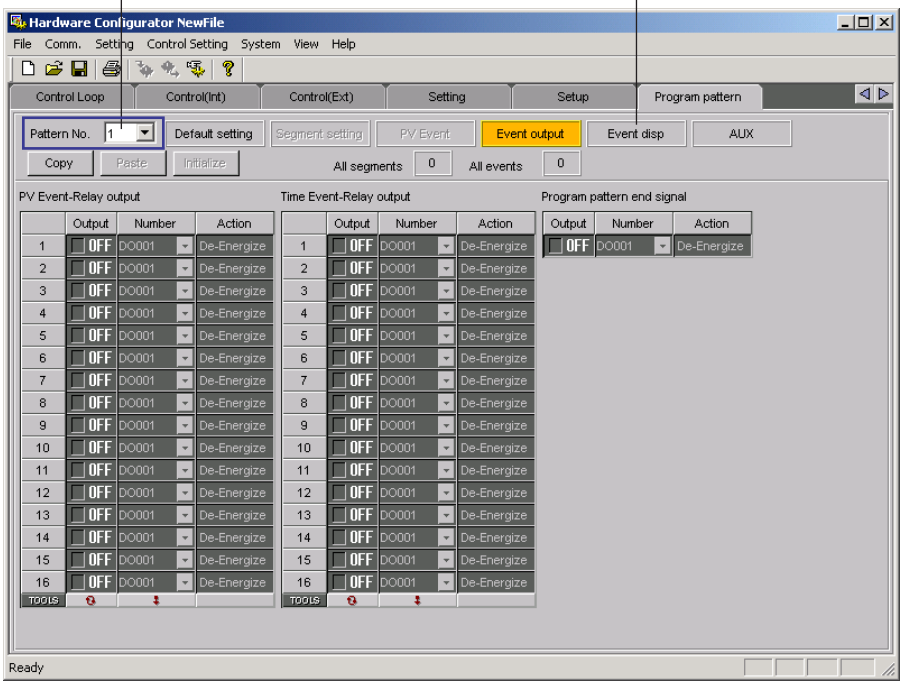
Event Output Setting in Program Control Related Setup Operations

If you set [Event Output] to [Separate], select the pattern number in the [Pattern No.] list box. For a description of the setup parameters of event output setting, follow the explanations in “Event Output Setting (PV event-relay output/Time event-relay output/ Program pattern end signal)” in section 3.6, “Program Control Related Setup Operations” in the *DAQSTANDARD User’s Manual (IM 04L31A01-61E)*.

Click [Event disp] to show the settings of event display group.

When the event output setting is [Separate], select the pattern number. (Cannot be selected when the event output setting is [Common].)

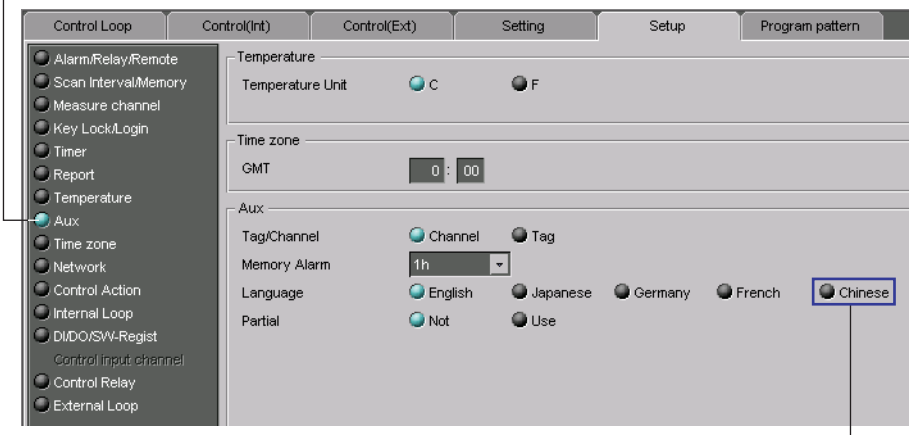
Set the event display group.



Selecting the Displayed Language

You can select Chinese as the displayed language.

Click here. (Or choose the [Setting] menu > [SETUP [Basic] Setting] > [Setting].)



You can select [Chinese].

List of Parameters

List of Parameters are given in the *DAQSTATION CX2000 Operation Guide (IM04L31A01-02E)* or the *DAQSTATION CX1000 Operation Guide (IM04L31A01-04E)*.
With the functional changes, the parameters below (underlined sections) have been changed.

Basic Setting Mode
CX2000: #9 AUX, Time zone
CX1000: #12 AUX, Time zone

Chinese has been added to AUX > Language.

Parameter	Selectable Range or Selections	Initial Value
AUX > Tag/Channel	Tag/Channel	Tag
AUX > Memory alarm	Off, 1h, 2h, 5h, 10h, 20h, 50h, or 100h	1h
AUX > Language	English, Japanese, German, French, or Chinese	English
AUX > Partial	Use/Not	Not
Time zone > Difference from GMT	–1200 to 1200	0
Batch	Use/Not	Use

CX2000: #10 Control <#2 DI/DO/SW-registration, AUX (Alarm mode...)>
CX1000: #12 Control <#4 AUX (Alarm mode...)>

AUX > Event output setting has been added.

Parameter	Selectable Range or Selections	Initial Value
AUX > Loop number	1 to 6	1
AUX > Remote setting	Off or Remote	Off
AUX > Alarm mode	ALWAYS, STOP, or STOP/MAN	ALWAYS
AUX > SP No. selection source 1 to 6	On/Off	1: On, 2-6: Off
AUX > PV/SP math	On/Off	Off
AUX > CLOG error	Error, Skip	Error
AUX > Event output setting	Common/Separate	Common

Setting mode (Control)
#7 Program control related (only when program control is ON)

"#6 Event output setting" in "Program parameter setting" is no longer available. <#2 Event output setting> is displayed directly under "#7 Program control related." As a result, "AUX (Auto message, Display position)" directly under "#7 Program control related" is displayed as #3 and "AUX (Event group)" is displayed as #4. In addition, "Hysteresis (PV event)" in <#1 Program parameter setting> is displayed as #6 and "Repeat action setting" is displayed as #7.

<#2 Event output setting>

Parameter	Selectable Range or Selections	Initial Value
Event output > Pattern number (only when the event output setting in Basic Control Settings is set to Separate)	1 to 4 (/PG1), 1 to 30 (/PG2)	1
Event output > Event kind	PVEvent, TimeEvent	TimeEvent
Event output > Relay Output EV1 to 16	On/Off	Off
Event output > On EV1 to 16 > Number	DO001 to DO006, DO101 to DO106, DO201 to DO206, RO001 to RO012, SW001 to SW036	DO001
Program pattern end signal > Relay Output	On/Off	Off
Program pattern end signal > On > Number	DO001 to DO006, DO101 to DO106, DO201 to DO206, RO001 to RO012, SW001 to SW036	DO001

Communication Commands

Communication commands are described in chapter 6, “Commands” in the *DAQSTATION CX1000/CX2000 Communication Interface User’s Manual (IM04L31A01-17E)*.

New Commands

Basic Setting Commands (Control)

• Event output setting

MN Sets the event output setting method

Syntax `MN p1`<terminator>
p1: Event output setting method (common or separate)
Query `MN[ p1]?`

Changed Commands

Setting Commands (Control)

• Event output setting

EO Sets the event output

When the event output setting method is separate

Syntax `EO p1,p2,p3,p4,p5`<terminator>
p1: Pattern number (1 to 30)
p2: Event kind (TimeEvent, PVEvent)
p3: Event number (1 to 16)
p4: Enable/disable relay output (Off, On)
p5: Relay number*
*: DO001 to DO006
DO101 to DO106
DO201 to DO206
RO001 to RO012 (expansion module)
SW001 to SW036 (internal switch)
DO001 to DO006, SW001 to SW018 on the CX1000.
Query `EO?`

When the event output setting method is Common

Syntax `EO p1,p2,p3,p4`<terminator>
p1: Event kind (TimeEvent, PVEvent)
p2: Event number (1 to 16)
p3: Enable/disable relay output (Off, On)
p4: Relay number*
*: DO001 to DO006
DO101 to DO106
DO201 to DO206
RO001 to RO012 (expansion module)
SW001 to SW036 (internal switch)
DO001 to DO006, SW001 to SW018 on the CX1000.
Query `EO?`

PA Program pattern end signal

When the event output setting method is separate

Syntax `PA p1,p2,p3<terminator>`

p1: Pattern number (1 to 30)

p2: Enable/disable relay output (Off, On)

p3: Relay number*

*: DO001 to DO006
DO101 to DO106
DO201 to DO206
RO001 to RO012 (expansion module)
SW001 to SW036 (internal switch)
DO001 to DO006, SW001 to SW018 on the CX1000.

Query `PA?`

When the event output setting method is Common

Syntax `PA p1,p2<terminator>`

p1: Enable/disable relay output (Off, On)

p2: Relay number*

*: DO001 to DO006
DO101 to DO106
DO201 to DO206
RO001 to RO012 (expansion module)
SW001 to SW036 (internal switch)
DO001 to DO006, SW001 to SW018 on the CX1000.

Query `PA?`

Basic Setting Commands (Measurement)

XU Sets the channel identification display, memory alarm time, language, whether or not to use the partial expanded display function and the batch function

Syntax `XU p1,p2,p3,p4<terminator>`

p1: The display used to identify the measurement/computation channels (TAG, CHANNEL)

p2: Memory alarm time (OFF, 1H, 2H, 5H, 10H, 20H, 50H, 100H)

p3: Language (ENGLISH, JAPANESE, GERMAN, FRENCH, CHINESE)

p4: Use/Not use partial expanded display function (USE, NOT)

Query `XU?`

Example Set the display used to identify the measurement/computation channels to channel numbers, the memory alarm length to 1 hour, the language to English, use the partial expansion function and the batch function.

```
XU CHANNEL,1H,ENGLISH,USE,USE
```

Description The SP command can be used when parameter p4 of this command is set to USE.

MEMO

MEMO

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